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| Notice of Allowability | Application No. | Applicant(s) | |
| | 10/714,075 | ZUMKEHR ET AL. <i>(initials)</i> | |
| | Examiner | Art Unit | |
| | Daniel D. Chang | 2819 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to Amendment filed 6/8/05.
2. The allowed claim(s) is/are 2-20 and 22-39.
3. The drawings filed on 14 November 2003 are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some*
 - c) None
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. Notice of References Cited (PTO-892)
2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 5/9/05
4. Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. Notice of Informal Patent Application (PTO-152)
6. Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. Examiner's Amendment/Comment
8. Examiner's Statement of Reasons for Allowance
9. Other _____.

Acknowledgement

Receipt is acknowledged of the Amendment filed June 8, 2005.

Reasons for Allowance

Claims 2-20, 22-39 are allowable over the prior art of record.

The following is an examiner's statement of reasons for allowance: the best prior art of record, Lesea, taken alone or in combination of other references, does not teach or fairly suggest a method or an apparatus comprising, among other things, the first switch and the second switch that are selectively closed to generate an internal voltage reference on the voltage reference node with which an input signal is compared in order to receive data (claim 2); a plurality of input receivers each having a first input coupled to the voltage reference node and a second input coupled to a respective data terminal of a plurality of data terminals (claim 5); a switch controller having a mode input, a first control output coupled to a control input of the first switch, and a second control output coupled to a control input of the second switch, the switch controller to control the opening and closing of the first switch and the second switch in response to the mode input (claim 7); an off-chip driver calibration mode for a pull-up and pull-down and a normal mode (claim 11); an external pull-up resistor having a first end coupled to a first power supply terminal; an external pull-down resistor having a first end coupled to a second power supply terminal; and a memory controller coupled between the double data rate memory device and the processor (claim 16); a switch controller having a mode input, a first control output coupled to a control input of the first switch, and a second control output coupled to a control input of the second switch, the switch controller control the opening and closing of the first switch and the

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second switch in response to the mode input (claim 22); and a first plurality of field effect transistors having sources coupled in parallel together to the first off-chip driver calibration terminal and drains coupled in parallel together to a voltage reference node; and second plurality of field effect transistors having drains coupled in parallel together to the second off-chip driver calibration terminal and sources coupled in parallel together to the voltage reference node (claim 24), as set forth in the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

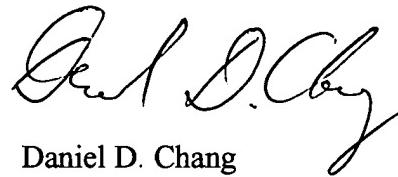
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel D. Chang whose telephone number is (571) 272-1801. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Tokar can be reached on (571) 272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel D. Chang
Primary Examiner
Art Unit 2819

dc

**DANIEL CHANG
PRIMARY EXAMINER**